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1 TCTGGGAAGG AGGCCAGGAG TGGGGCAGGT CAACTGACTG GGAGCAGGGG
51 ATCTGGGTTC CAAGAAGGAG TTGTGTTTGA GGTGGGGTCT GGGTCCTCGT
101 GGAAGTCAGG ACTCCCAGGC AGAAAAGAGG CAGGCTGCAG GGAAGTAAGG
151 AGGAGGCATG GCACCTTCTC ATCGGGCATC ACAGGTGGGG TTTTGCCCCA
201 CCCCTGAACG CCCTCTGTGG CGCCTTCCAC CCACCTGTAG GCCCAGAAGG
251 ATGTCGGTCT GCTACCGTCC CCCAGGGAAC GAGACACTGC TGAGCTGGAA
301 GACTTCGCGG GCCACAGGCA CAGCCTTCCT GCTGCTGGCG GCGCTGCTGG
351 GGCTGCCTGG CAACGGTTTC GTGGTGTGGA GCTTGCGGG CTGGCGGCTT
401 GCACGGGGGC GACCGCTGGC GGCAACGCTT GTGTTGCACC TGGCGCTGGC
451 CGACGGCGCG GTGCTGCTGC TCACGCCGTT CTTTGTGGCC TTCCTGACCC
501 GGCAGGCTTG GCCGCTGGGC CAGGCGGGCT GCAAGGCGGT GTACTACGTG
551 TGCGCGCTCA GCATGTACGC CAGCGTGCTG CTCACCGGCC TGCTCAGCCT
601 GCAGCGCTGC TTCGCAGTCA CCCGCCCTT CCTGGCGCTT CGGCTGCGCA
651 GCCCCGCCCT GGCCCGCCGC CTGCTGCTGG CGGTCTGGCT GGCCGCCCTG
701 TTGCTCGCCG TCCCGGCCGC CGTCTACCGC CACCTGTGGA GGGACCGCGT
751 ATGCCAGCTG TGCCACCCGT CGCCGGTCCA CGCCGCCGCC CACCTGAGCC
801 TGGAGACTCT GACCGCTTTC GTGCTTCCTT TCGGGCTGAT GCTCGGCTGC
851 TACAGCGTGA CGCTGGCACG GCTGCGGGGC GCCCGCTGGG GCTCCGGGCG
901 GCACGGGGCG CGGGTGGGCC GGCTGGTGAG CGCCATCGTG CTTGCCTTCG
951 GCTTGCTCTG GGCCCCCTAC CACGCAGTCA ACCTTCTGCA GCGGTCTGCA
1001 GCGCTGGCTC CACCGGAAGG GGCCTTGGCG AAGCTGGGCG GAGCCGGCCA
1051 GGCGGCGCGA GCGGGAAC TA CGGCCTTGGC CTTCTTCAGT TCTAGCGTCA
1101 ACCCGGTGCT CTACGTCTTC ACCGCTGGAG ATCTGCTGCC CCGGGCAGGT
1151 CCCC GTTTCC TCACGCGGCT CTTTGAAGGC TCTGGGGAGG CCCGAGGGGG
1201 CGGCCGCTCT AGGGAAGGGA CCATGGAGCT CCGAACTACC CCTCAGCTGA
1251 AAGTGGTGGG GCAGGGCCGC GGCAATGGAG ACCCGGGGGG TGGGATGGAG
1301 AAGGACGGTC CGGAATGGGA CCTTTGACAG CAGACCCTAC AACCTGCTGC
1351 CCTTCCCTGT CCCTTTCCAC CCCCCACCA CCCTCCAGAG GTCAGTGTTT
1401 TGGGACATTT GGGGACCCTT CTTTGACTAG AGTTTGGATC TGGCTGGGTA
1451 GGATTAGTAT ACACTTGGGG CAGGCCAGG CTCCTCCAAA CTGAGGGATT
1501 ATGAGGGTGG TGATGGTCCC TGTTAAGGAC TATIGTGTGC TTGCAAGTTG

FIG. 1

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1 MAPSHRASQV GFCPTPERPL WRLPPTCRPR RMSVCYRPPG NETLLSWKTS
51 RATGTAFLLL AALLGLPGNG FVVWSLAGWR LARGRPLAAT LVLHLALADG
101 AVLLLT PFFV AFLTRQAWPL GQAGCKAVYY VCALS MYASV LLTGLLSLQR
151 CFAVTRPFLA LRLRSPALAR RLLLA VWLAA LLLAVPAAVY RHLWRDRVCO
201 LCHPSPVHAA AHL SLETLTA FVL PFGLMLG CYSVTLARLR GARWGSGRHG
251 ARVGRLVSAI VLA FGLLWAP YHAVNLLQAV AALAPPEGAL AKLGGAGQAA
301 RAGTTALAFF SSSVNPVLYV FTAGDLLPRA GPRFLTRLFE GSGEARGGGR
351 SREGTMELRT TPQLKVVGQG RGNGDPGGGM EKDGPEWDL

FIG.2

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10 30 50
CTGGGAAGGAGGCCAGGAGTGGGGCAGGTCAACTGACTGGGAGCAGGGGATCTGGGTTCC

70 90 110
AAGAAGGAGTTGTGTTTGAGGTGGGGTCTGGGTCCTCGTGGAAGTCAGGACTCCCAGGCA

130 150 170
GAAAAGAGGCAGGCTGCAGGGAAGTAAGGAGGAGGCATGGCACCTTCTCATCGGGCATCA
MetAlaProSerHisArgAlaSer

190 210 230
CAGGTGGGGTTTTGCCCCACCCCTGAACGCCCTCTGTGGCGCCTTCCACCCACCTGTAGG
GlnValGlyPheCysProThrProGluArgProLeuTrpArgLeuProProThrCysArg

250 270 290
CCCAGAAGGATGTCGGTCTGCTACCGTCCCCAGGGAACGAGACACTGCTGAGCTGGAAG
ProArgArgMetSerValCysTyrArgProProGlyAsnGluThrLeuLeuSerTrpLys

310 330 350
ACTTCGCGGGCCACAGGCACAGCCTTCTGCTGCTGGCGGCGCTGCTGGGGCTGCCTGGC
ThrSerArgAlaThrGlyThrAlaPheLeuLeuLeuAlaAlaLeuLeuGlyLeuProGly

370 390 410
AACGGTTTCGTGGTGTGGAGCTTGGCGGGCTGGCGGCTTGCACGGGGGCGACCGCTGGCG
AsnGlyPheValValTrpSerLeuAlaGlyTrpArgLeuAlaArgGlyArgProLeuAla

430 450 470
GCAACGCTTGTGTTGCACCTGGCGCTGGCCGACGGCGCGGTGCTGCTGCTCACGCCGTTT
AlaThrLeuValLeuHisLeuAlaLeuAlaAspGlyAlaValLeuLeuLeuThrProPhe

490 510 530
TTTGTGGCCTTCCTGACCCGGCAGGCTTGGCCGCTGGGCCAGGCGGGCTGCAAGGCGGTG
PheValAlaPheLeuThrArgGlnAlaTrpProLeuGlyGlnAlaGlyCysLysAlaVal

550 570 590
TACTACGTGTGCGCGCTCAGCATGTACGCCAGCGTGCTGCTCACCGGCCTGCTCAGCCTG
TyrTyrValCysAlaLeuSerMetTyrAlaSerValLeuLeuThrGlyLeuLeuSerLeu

610 630 650
CAGCGCTGCTTCGCAGTCACCCGCCCTTCTGGCGCTTCGGCTGCGCAGCCCGGCCCTG
GlnArgCysPheAlaValThrArgProPheLeuAlaLeuArgLeuArgSerProAlaLeu

670 690 710
GCCCCGCCGCTGCTGCTGGCGGTCTGGCTGGCCGCCCTGTTGCTCGCCGTCGCCGCCGCC
AlaArgArgLeuLeuLeuAlaValTrpLeuAlaAlaLeuLeuLeuAlaValProAlaAla

730 750 770
GTCTACCGCCACCTGTGGAGGGACCGCGTATGCCAGCTGTGCCACCCGTCGCCGGTCCAC
ValTyrArgHisLeuTrpArgAspArgValCysGlnLeuCysHisProSerProValHis

FIG 3A

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790 810 830
GCCGCCGCCACCTGAGCCTGGAGACTCTGACCGCTTTCGTGCTTCCTTTCGGGCTGATG
AlaAlaAlaHisLeuSerLeuGluThrLeuThrAlaPheValLeuProPheGlyLeuMet

850 870 890
CTCGGCTGCTACAGCGTGACGCTGGCACGGCTGCGGGGCGCCCGCTGGGGCTCCGGGCGG
LeuGlyCysTyrSerValThrLeuAlaArgLeuArgGlyAlaArgTrpGlySerGlyArg

910 930 950
CACGGGCGCGGGTGGGCCGGCTGGTGAGCGCCATCGTGCTTGCCTTCGGCTTGCTCTGG
HisGlyAlaArgValGlyArgLeuValSerAlaIleValLeuAlaPheGlyLeuLeuTrp

970 990 1010
GCCCCCTACCACGCAGTCAACCTTCTGCAGGCGGTGCGAGCGCTGGCTCCACCGGAAGGG
AlaProTyrHisAlaValAsnLeuLeuGlnAlaValAlaAlaLeuAlaProProGluGly

1030 1050 1070
GCCTTGGCGAAGCTGGGCGGAGCCGGCCAGGCGGCGAGCGGGAACCTACGGCCTTGCC
AlaLeuAlaLysLeuGlyGlyAlaGlyGlnAlaAlaArgAlaGlyThrThrAlaLeuAla

1090 1110 1130
TTCTTCAGTTCTAGCGTCAACCCGGTGCTCTACGTCTTCACCGCTGGAGATCTGCTGCCC
PhePheSerSerSerValAsnProValLeuTyrValPheThrAlaGlyAspLeuLeuPro

1150 1170 1190
CGGGCAGGTCCCCGTTTCCTCACGCGGCTCTTCAAGGCTCTGGGGAGGCCCGAGGGGGC
ArgAlaGlyProArgPheLeuThrArgLeuPheGluGlySerGlyGluAlaArgGlyGly

1210 1230 1250
GGCCGCTCTAGGGAAGGGACCATGGAGCTCCGAACCTACCCCTCAGCTGAAAGTGGTGGGG
GlyArgSerArgGluGlyThrMetGluLeuArgThrThrProGlnLeuLysValValGly

1270 1290 1310
CAGGGCCGCGGCAATGGAGACCCGGGGGGTGGGATGGAGAAGGACGGTCCGGAATGGGAC
GlnGlyArgGlyAsnGlyAspProGlyGlyGlyMetGluLysAspGlyProGluTrpAsp

1330 1350 1370
CTTTGACAGCAGACCCTACAACCTGCTGCCCTTCCCTGTCCCTTTCCACCCCCACCCAC
Leu

1390 1410 1430
CCTCCAGAGGTCAGTGTCTGGGACATTTGGGGACCCTTCTTTGACTAGAGTTTGGATCT

1510 1530 1550
TGAGGGTGGTGATGGTCCCTGTTAAGGACTATTGTGTGCTTGGCAAGTTG

FIG. 3B

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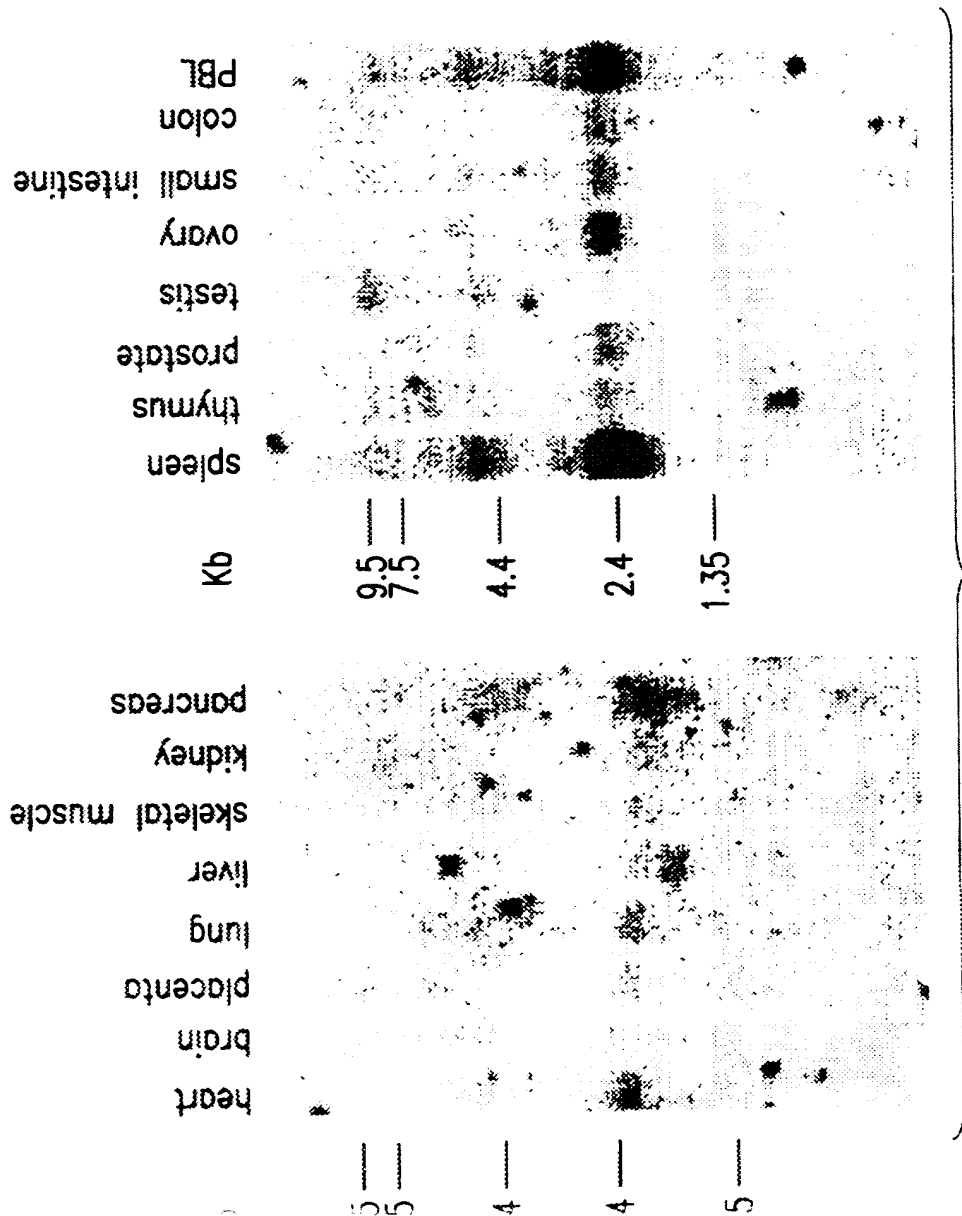


FIG.4

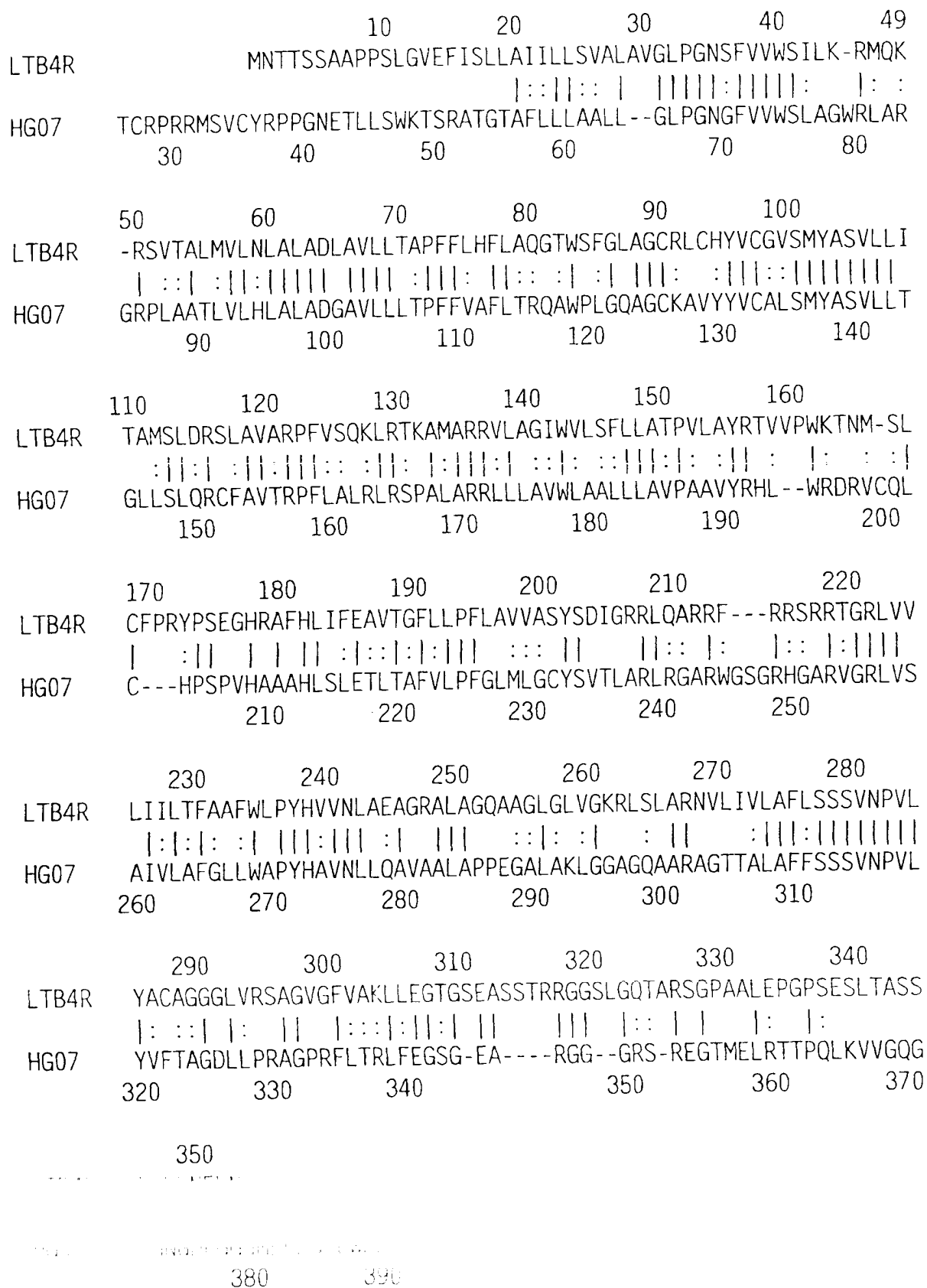


FIG.5